



3A5

H-F TWIN TRIODE
MINIATURE TYPE

3A5

Filament	Coated		
Filament Arrangement	<u>Series*</u>	<u>Parallel**</u>	
Voltage	2.8	1.4	d-c volts
Current	0.11	0.22	amp.
Direct Interelectrode Capacitances:°			
	<u>Triode Unit T₁</u>	<u>Triode Unit T₂</u>	
Grid to Plate	3.2	3.2	μf
Grid to Filament	0.9	0.9	μf
Plate to Filament	1.0	1.0	μf
Plate to Plate		0.32	μf
Maximum Overall Length			2-1/8"
Maximum Seated Height			1-7/8"
Maximum Diameter			3/4"
Bulb			T-5-1/2"
Base [▲]			Miniature Button 7-Pin
Pin 1 - Filament -			Pin 5 - Grid T ₁
Pin 2 - Plate T ₂			Pin 6 - Plate T ₁
Pin 3 - Grid T ₂			Pin 7 - Fil. (+ series)
Pin 4 - Fil. Mid-Tap			
Pin 4 - (+ parallel)			
RCA Socket			Stock No. 9914
Mounting Position	BOTTOM VIEW (7BC)		Any
For convenience, one triode unit is identified as T ₁ ; the other as T ₂ .			
Maximum Ratings Are Design-Center Values			
<u>A-F POWER AMPLIFIER</u>			
Plate Voltage		135 max.	volts
Plate Current		5 max.	ma.
Plate Dissipation		0.5 max.	watt
Characteristics - Class A ₁ Amplifier:			
Plate Voltage		90	volts
Grid Voltage		-2.5	volts
Amplification Factor		15	
Plate Resistance		8300	ohms
Transconductance		1800	μmhos
Plate Current		3.7	ma.
<u>R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy</u>			
Key-down conditions per tube without modulation			
D-C Plate Voltage		135 max.	volts
D-C Grid Voltage		-30 max.	volts
D-C Plate Current (per unit)		15 max.	ma.
D-C Grid Current (per unit)		2.5 max.	ma.
Plate Input (per unit) •		2.0 max.	watts
Plate Dissipation (per unit)		1.0 max.	watt
Typical Operation At 40 Mc With Both Units In Push-Pull:			
D-C Plate Voltage		135	volts
D-C Grid Voltage •		-20	volts
		4000	ohms
		570	ohms
Peak R-F Grid-to-Grid Voltage		90	volts
D-C Plate Current		30	ma.
D-C Grid Current (approx.)		5	ma.
Driving Power (approx.)		0.2	watt
Power Output (approx.)		2	watts

*, **, °, •, ▲: see next page.

June 1, 1942

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TENTATIVE DATA

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(continued from preceding page)

- * Filament voltage applied across the two sections in series between pins No.1 and No.7. Grid voltage is referred to Pin No.1. For series filament operation, a shunting resistor must be connected across the section between pins No.1 and No.4, to by-pass excess cathode current in this section. The value of the shunting resistor should be adjusted to make the voltage across the shunted section equal to the voltage across the section between pins No.4 and No.7. When other tubes in series-filament arrangement contribute to the filament current of the 3A5, an additional shunting resistor may be required between pins No.1 and No.7.
- ** Filament voltage applied across the two sections in parallel between pin No.4 and pins No.1 and No.7 connected together. Grid voltage is referred to pins No.1 and No.7 tied together.
- o With no external shield
- Obtained by grid resistor (4000), cathode resistor (570), or fixed supply.
 - ▲ *The center hole in sockets designed for this base provides for the possibility that this tube type may be manufactured with the exhaust-tube tip at the base end. For this reason, it is recommended that in equipment employing this tube type, no material be permitted to obstruct the socket hole.*

June 1, 1942

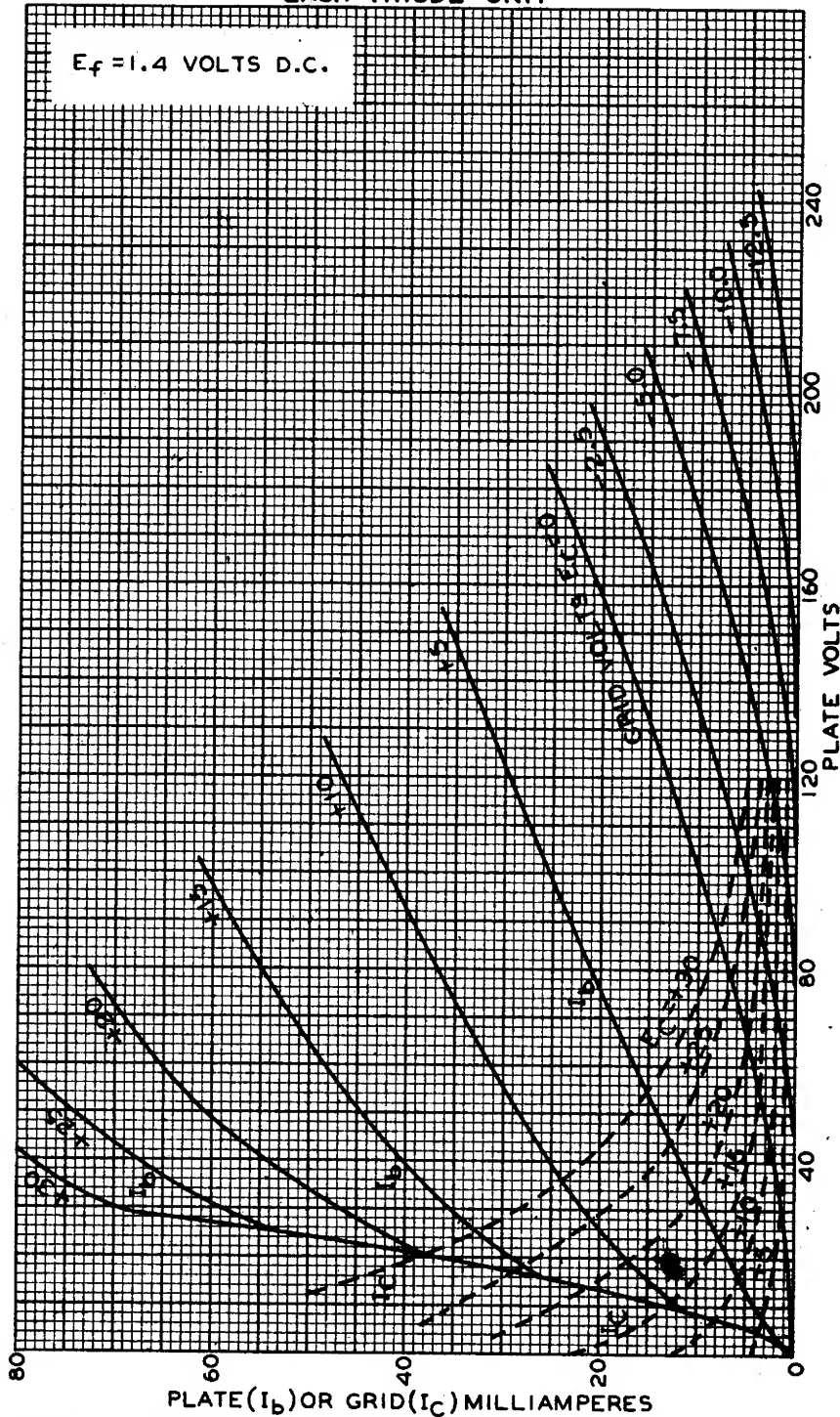
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TENTATIVE DATA



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AVERAGE PLATE CHARACTERISTICS EACH TRIODE UNIT



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